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EXAMINER

BAREFORD, KATHERINE A

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,815

Applicant(s)

HALMSCHLAGER ET AL.

Examiner

Katherine A. Bareford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

Claims 1-19 are canceled

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: .

DETAILED ACTION

1. The Examiner notes the filing of this 371 of PCT/EP01/07785 and the accompanying preliminary amendment.

Specification

2. The disclosure is objected to because of the following informalities: at page 1, after the title, applicant should indicate that this case is a national stage application of PCT/EP01/07785, filed July 6, 2001.

Appropriate correction is required.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the features of claims 29 and 36.

Claim Objections

4. The Examiner notes that applicant in claim 30 requires an "application device configured to apply a viscid medium to the material web", and claim 31 requires that the application device first applies the material to belt, which then applies the material to the web. From this wording, the Examiner understands "application device configured to apply a viscid medium to the material web" to be an applicator configured to apply viscid medium either directly or indirectly to the web.
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Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 20-25, 30-33, 36 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Laapotti (US 6372090).

Laapotti teaches a method of application of liquid through viscid mediums onto the surface of a pre-dried material web. Figure 1 and column 3, lines 15-25 and 45-65 and column 4, lines 20-35 (the web is dried before the first coating treatment and again before the second coating treatment. A viscid medium coating is applied to at least one side of the material web. Figure 1 and column 3, lines 15-25 and 45-65 (the "treating agent" as described would be a viscid medium coating). The web with applied coating is routed through a press nip. Figure 1 and column 3, lines 45-65. The material web is supported, substantially without free draw, after said routing step. Figure 1 and column 6, lines 1-20 and column 4, lines 20-35. The Examiner notes that as worded claim 20 also would allow for the routing through the press nip to occur before the applying of the coating step. (Laapotti also shows this, at column 1, lines 20-65 (the press nip of elements 3,4) and figure 1).

Claim 21: the supporting step includes supporting the web with at least one flexible continuous belt substantially until the material web reads a dryer cylinder of a downstream dryer group. Figure 1 and column 3, lines 45-65 and column 4, lines 20-35.

Claim 22: the applying step includes the substeps of applying the viscid medium to an outside surface of a flexible continuous belt. The medium is transferred from the outside surface of the belt to an underneath side of the web. Column 3, lines 45-65 and figure 1.

Claim 23: the belt is configured to also provide support to the web. Figure 1 and column 6, lines 20-30.

Claim 24: the applying step can also include applying the viscid medium to an outside surface of a flexible continuous belt. Column 3, lines 45-65, column 4, lines 20-35 and figure 1. The medium is transferred from the outside surface of the belt to a top side of the web. Column 4, lines 20-35 and figure 1 (the second applicator unit 21).

Claim 25: the belt is also configured to provide support to the material web. Column 6, lines 20-30 and figure 1.

Claim 30: Laapotti also provides a coating device for the web. Figure 1 and column 3, line 20 through column 4, lines 35. An application device is provided to apply a viscid medium indirectly to the material web. Column 3, lines 45-65 and figure 1. First and second support rolls are provided. Column 3, lines 45-65 and figure 1. A belt supported by the first and second support rolls, configured to support the web without free draw is provided. Figure 1 and column 3, lines 45-65. A press shoe is provided proximate to the continuous belt, forming a press nip

therebetween. Figure 1 and column 3, lines 45-65. The nip is located downstream from the application device. Figure 1 and column 3, lines 45-65.

Claim 31: the application device includes a first application device located proximate to an outside surface of the continuous belt where the first support roller is in contact with the belt.

Figure 1 and column 3, lines 45-65. The first application device is configured to apply medium to the belt for subsequent transfer to the web. Figure 1 and column 3, lines 45-65.

Claim 32: the device can further include a plurality of guide rollers. Figure 1 and column 3, lines 45-65. An application roll is also provided. Figure 1 and column 3, lines 45-65 and column 4, lines 20-35. An other continuous belt disposed around the application roll and guide rollers is provided. Figure 1 and column 3, lines 45-65. The other belt is configured as a press belt. Figure 1 and column 3, lines 45-65 (note that the second applicator unit is an inverted version of the first). A second application device is disposed proximate to an outside surface of the other belt. Figure 1 and column 3, lines 45-65 and column 4, lines 20-35. The application roll is in contact with the other belt. Figure 1 and column 3, lines 45-65. The second application device is configured to deliver a viscid medium to the other belt for subsequent transfer to an other side of the web. Figure 1 and column 3, lines 45-65 and column 4, lines 20-35.

Claim 33: the device further comprises a dryer section with at least one dryer cylinder. Column 6, line 60 through column 7, line 10 (for example) and figure 3. At least one of the belts supports the web substantially to the at least one dryer cylinder. See figures 1 and 3.

Claim 36: the device can further include a suction roll downstream of the press nip. See column 3, lines 20-45 and column 4, lines 20-35 and figures 1 and 3. The suction roll is

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configured to transfer the material web to the dryer cylinder. See column 3, lines 20-45 and column 4, lines 20-35 and figures 1 and 3.

Claim 38: the device is configured to produce board base paper, which would include corrugated board base paper. Column 3, lines 20-30.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 27, 29, 35, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laapotti (US 6372090).

Laapotti teaches all the features of these claims, as discussed in the 35 USC 102(e) rejection above, except (1) the penetration segment length (claims 27 and 35), (2) the web dryness prior to coating (claim 29), (3) the drive (claim 37) and (4) the adjustable guide rolls (claim 38). Laapotti does teach that a penetration segment is provided after application and before the nip. See figure 1. Laapotti further teaches that an "extended nip" is provided by the contact between the belt of the transfer fabric 14 and the belt 18. Column 3, line 45 through column 4, line 25 and figure 1. This extended nip is at least 50 mm in length. Column 3, lines 15-20. Laapotti further teaches that when a web is usually formed in a paper making process, it

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is dried to only about 2-4 % moisture content, and that the present invention allows there to be more moisture present, before applying the treating agent. See column 2, lines 15-50.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Laapotti to (1) perform routine experimentation to optimize the extended nip length, given the teaching that the extended nip provides desirable benefits and should be at least 50 mm long, and as a result of this optimization also providing the 100 mm length "penetration segment", which would be the portion of the "extended nip" prior to the press nip. (2) It further would have been obvious to perform routine experimentation to optimize the dryness prior to the coating treatment, since Laapotti teaches that this process provides drying before coating and also teaches that a greater moisture than 2-4 % can be desirably provided. (3) it would further have been obvious to provide a drive device for the belts with an expectation of desirably controlled coating, because Laapotti teaches that the belts are guided around rolls and movement of the rolls/belt must be provided with some source, and it is well known in the art that belts would be driven by a drive source. (4) it would further have been obvious to make at least one of the guide rolls for the belts adjustable with an expectation of desirably controlled coating results, because this would allow for the control of the extended nip length (as discussed in 1 above), and allow for the use of the system with different coatings and materials with the nip length optimized for these different materials.

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9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Laapotti as applied to claims 20-25, 30-33, 36 and 39 above, and further in view of Lindsay et al (US 6228216).

Laapotti teaches all the features of this claim except the web mass.

However, Lindsay teaches that when paper webs using a papermaking machine, desirable webs can be formed with a mass of, for example, 15-40 g/m². Column 3, line 60 through column 4, line 40.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Laapotti to use a web mass of ¹⁵⁻⁴⁰g/m² as suggested by Lindsay with an expectation of desirable coating results, because Laapotti teaches a desirable treatment method for paper webs formed by a papermaking machine and Lindsay teaches that a desirable weight for paper webs formed by a papermaking machine is ¹⁵⁻⁴⁰g/m².

10. Claims 26 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laapotti as applied to claims 20-25, 30-33, 36 and 39 above, and further in view of Japan 48-041007 (hereinafter '007).

Laapotti teaches all the features of these claim except applying the medium incrementally to a plurality of belts and supporting the material with at least one belt.

However, '007 teaches a method for applying coating material to a running web using belts and nip rollers. See the abstract and figures 1-2. As shown by figures 1-2, the coating can

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be applied to a single belt or applied to multiple belts incrementally. (note the lower belt/belts).

ms The lower belt/belts would also support the web. *FIG. 2.*

ms It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Laapotti to ^{use} multiple belts to coat incrementally as suggested by '007 with an expectation of desirable coating results, because Laspotti teaches a desirable treatment using coating belts for a web and '007 teaches that it is desirable to coat a web with a single belt or use multiple belts and an incremental coating.

11. WO 99/45203 and WO 99/55966 also teach a belt and nip treatment of a web.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (703) 308-0078. The examiner can normally be reached on M-F(7:00-4:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Kath G. 3/1
KATHERINE A. BAREFORD
PRIMARY EXAMINER
GROUP 1100/100